



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

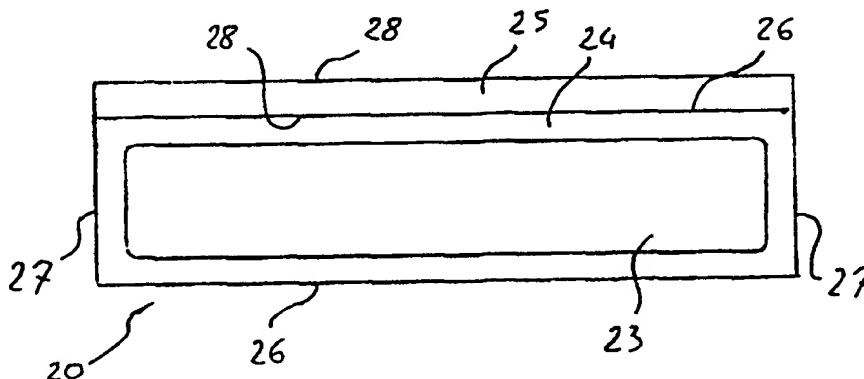
(51) International Patent Classification <sup>6</sup> : <b>H01B 12/02</b>		A1	(11) International Publication Number: <b>WO 99/08289</b>
(21) International Application Number: PCT/EP98/04991		(43) International Publication Date: 18 February 1999 (18.02.99)	
(22) International Filing Date: 28 July 1998 (28.07.98)		(81) Designated States: AU, BR, CA, CN, JP, KR, NZ, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).	
(30) Priority Data: 97202433.5 5 August 1997 (05.08.97) EP 60/059,986 25 September 1997 (25.09.97) US		Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	
(71) Applicant (for all designated States except US): PIRELLI CAVIE SISTEMI S.P.A. [IT/IT]; Viale Sarca, 222, I-20126 Milano (IT).			
(72) Inventors; and (75) Inventors/Applicants (for US only): CARACINO, Paola [IT/IT]; Via Ettore Bugatti, 7, I-20142 Milano (IT). GHERARDI, Laura [IT/IT]; Via Canesi, 8, I-20052 Monza (IT). METRA, Piero [IT/IT]; Via Virgilio, 4, I-21100 Varese (IT). NASSI, Marco [IT/IT]; Via Cibrario, 36bis, I-10100 Torino (IT).			
(74) Agent: CHECCACCI, Giorgio; Porta, Checcacci & Botti S.r.l., Viale Sabotino, 19/2, I-20135 Milano (IT).			

jc525 U.S. PTO  
09/498062  
02/04/00

(54) Title: HIGH TEMPERATURE SUPERCONDUCTING CABLE AND PROCESS FOR MANUFACTURING THE SAME

## (57) Abstract

A high temperature superconducting cable comprises a tubular support, a plurality of superconducting tapes spirally wound onto said support so as to form one or more superconducting layers, electroinsulating means for the superconducting layer, refrigerating means and thermal insulation means to keep the superconducting layer below a predetermined working temperature. According to the invention, the superconducting tapes comprise superconducting material enclosed by a metal covering to which at least a metal strip is connected.



# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP 98/04991

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 6 H01B12/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 6 H01B

IC525 U.S. PRO  
09/498062



02/04/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 786 783 A (PIRELLI) 30 July 1997 see page 4, line 24 - page 9, line 44; figures 1-3	1, 15, 18
A	EP 0 743 658 A (THE BABCOCK & WILCOX COMP.) 20 November 1996 see column 3, line 20 - column 5, line 3; figures 1-3D	1-3, 5, 10, 18-21

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

7 January 1999

Date of mailing of the international search report

14/01/1999

Name and mailing address of the ISA  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Demolder, J

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 98/04991

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 786783 A	30-07-1997	IT MI952776 A	30-06-1997
		AU 7532296 A	03-07-1997
		BR 9604768 A	23-06-1998
		CA 2193917 A	29-06-1997
		JP 9231841 A	05-09-1997
		NZ 299952 A	19-12-1997
EP 743658 A	20-11-1996	US 5620798 A	15-04-1997
		JP 8339722 A	24-12-1996
		US 5718034 A	17-02-1998

39 2 64423190 ARCH REPORT

International Application No

PCT/EP 98/04991

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 6 H01B12/02

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 H01B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 786 783 A (PIRELLI) 30 July 1997 see page 4, line 24 - page 9, line 44; figures 1-3	1, 15, 18
A	EP 0 743 658 A (THE BABCOCK & WILCOX COMP.) 20 November 1996 see column 3, line 20 - column 5, line 3; figures 1-3D	1-3, 5, 10, 18-21

☐ Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

**\* Special categories of cited documents:****"A"** document defining the general state of the art which is not considered to be of particular relevance**"E"** earlier document but published on or after the international filing date**"L"** document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)**"O"** document referring to an oral disclosure, use, exhibition or other means**"P"** document published prior to the international filing date but later than the priority date claimed**"T"** later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention**"X"** document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone**"Y"** document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.**"S"** document member of the same patent family

Date of the actual completion of the international search

7 January 1999

Date of mailing of the international search report

14/01/1999

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Demolder, J

## 39 2 64423190 ARCH REPORT

Information on patent family members

International Application No

PCT/EP 98/04991

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 786783 A	30-07-1997	IT MI952776 A	30-06-1997
		AU 7532296 A	03-07-1997
		BR 9604768 A	23-06-1998
		CA 2193917 A	29-06-1997
		JP 9231841 A	05-09-1997
		NZ 299952 A	19-12-1997
EP 743658 A	20-11-1996	US 5620798 A	15-04-1997
		JP 8339722 A	24-12-1996
		US 5718034 A	17-02-1998